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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,685	03/19/2004	Michael J. Ziegler	1922A1	8173

7590 05/03/2006

PPG INDUSTRIES, INC.  
Intellectual Property Department  
One PPG Place  
Pittsburgh, PA 15272

EXAMINER
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ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/804,685

Applicant(s)

ZIEGLER ET AL.

Examiner

Marc S. Zimmer

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03/19/04 and the interview of 04/24/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 17-27, 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 16 and 28 is/are rejected.
- 7) ☒ Claim(s) 6, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                                         |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                             | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/06/04, 05/31/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

***Election/Restrictions***

This application contains claims directed to the following patentably distinct species:

a compound derived from a polyol and a lactone wherein the polyol may be selected from (i) an acrylic polyol and (ii) a polysiloxane polyol, and

a film-forming resin wherein there are innumerable types of known film-forming polymers.

The species are independent or distinct because the recitation of any one of the aforementioned compound or film-forming resin would not even render obvious the other.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

During a telephone conversation with Donald Palladino on April 24, 2006 a provisional election was made with traverse to prosecute wherein the polyol is acrylic polyol and the film-forming resin is a polyester. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-27 and 29-30 are withdrawn from further consideration by the examiner per 37 CFR 1.142(b) as being drawn to a non-elected invention. (Claims 29 and 30, insofar as they ultimately depend from claim 2 do, in fact, recite an acrylic polyol. However, it appears that claims 29 and 30 were intended to have claimed an embodiment of the invention wherein the polyol was polysiloxane polyol though the possibility that both polyols were to be present was

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also considered. Applicant should clarify the meaning of these claims in their reply to this Office action.)

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Analysis***

It is noted for the record that compounds (a) are, themselves, capable of forming films and, thus, their mention in a reference would constitute an anticipation of both components (a) and (b) as Applicant has not stipulated that (a) and (b) are different.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-13, 16, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kessler et al., U.S. Patent # 4,988,763. Kessler discloses the preparation of cyclic ester-modified acrylic polymers that may be employed in, among other things, the formulation of powder coatings (column 6, lines 61-64). The polymers are generally acrylic polymers containing at least some repeat units derived from the product of (meth)acrylic acid and an  $\alpha,\omega$ -diol, e.g. 2-hydroxyethyl acrylate. Favored cyclic ester are those mentioned in column 5, lines 27-31 including caprolactone. The product realized upon reacting the acrylic polyol and lactone is a hydroxyl group-functional material that may be crosslinked with usual crosslinkers such as polyisocyanates, amine resins, etc. (column 6, lines 50-55).

Exemplary acrylic polyols are set out in the examples. From the examples, examples 1 and 6 for instance, it can be seen that the limitations of claims 3-5, 7-8, and 10 are satisfied either expressly or inherently.

As for claims 4, the acrylic fraction of the graft copolymers clearly makes up better than 50 wt.% of the copolymer taught in Example 6. Accordingly, the limitation of this claim is inherently satisfied.

The Examiner wishes to expound briefly on his interpretation of the meaning of claim 10. The Examiner views claim 10 as simply stating that the copolymer will have at least some pendant "chains" that contain between 1 and 50 lactone units. However, as written, not all of the chains must adhere to this limitation. The reference does not expressly disclose the length of the polyester side chains created upon polymerizing the lactone. Nevertheless, it is the Examiner's position that this limitation MUST be

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inherently satisfied particularly for those polymers that have a molecular weight,  $M_w$ , on the order of 5,000 because the acrylic chain comprises a larger weight fraction of the polymer than do the combined weight contributions of the pendant polyester chains and, were the polyester chains to have more than 50 repeat units, the molecular weight would have to be well above that stated in most of the examples.

Concerning claim 13, the coating compositions described in claims 13 and 14 comprise the copolymer as the majority contributor to the weight of the composition. (It is appreciated that, in those examples, the composition is solvent-based. However, similar compositions devoid of solvent are contemplated by the broader disclosure.)

Claims 1, 5, 7, 9, 11-13, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Takezawa et al., JP 54-125232. The abstract describes a powder coating composition comprising a lactone-modified vinyl polymer and a curing agent in a weight ratio of 85:15 to 97:3. The broader description states that the monomers employed in preparing the vinyl polymer backbone are (meth)acrylic acid and glycidylpropyl (meth)acrylate. The number-average molecular weight of the copolymer is 3,000 to 15,000 and, thus, the limitation of claim 7 is inherently satisfied.

#### ***Allowable Subject Matter***

Claims 6, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner wishes to point out that it is quite possible that the limitation recited in claim 6 is inherently met by one or more embodiments of the copolymer suggested by the aforementioned prior art. The

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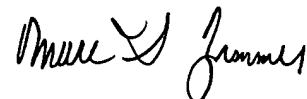
Examiner quite simply can't identify sufficient evidence so as to make a proper assertion of inherency.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 1, 2006



MARC S. ZIMMER  
PRIMARY EXAMINER